



Attorney Docket No. 1454.1524

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Erich MIKK

Application No.: 10/775,331

Group Art Unit: 2123

Filed: February 11, 2004

Examiner: Andre Pierre Louis

For: METHODS FOR CONFIGURING AN ELECTRICAL SYSTEM

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In a Notice of Appeal filed January 10, 2008, the applicant appealed the Examiner's August 10, 2007 Office Action finally rejecting claims 1-8. Appellant's Brief, together with the requisite fee set forth in 37 C.F.R. § 1.17, is submitted herewith. This Appeal Brief is accompanied by the required appeal fee set forth in 37 C.F.R. § 41.20(b)(2).

A Petition for a two-month extension of time, together with the requisite fee for same, is submitted herewith, thereby extending the period for response to May 12, 2008 (May 10, 2008 and May 11, 2008 being a Saturday and Sunday).

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I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest is Siemens Aktiengesellschaft, the assignee of the application.

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II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

Appellant, appellant's legal representative, and the assignee do not know of any prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

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III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))

Claims 1-8 have been finally rejected and are on appeal.

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IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))

Appellant's Request for Reconsideration filed November 29, 2007 did not amend any of claims 1-8 and was not entered for purposes of Appeal as indicated by the Advisory Action mailed December 19, 2007.

V. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

Independent claim 1 recites a method for representing the configuration of an electrical system (Fig. 1, for example) that includes generating and displaying configured function blocks of the electrical system as a first set of representations (for example, CFC in Fig. 1). The method includes generating and displaying configured objects as a second set of representations corresponding to the configured function blocks (for example, WinCC in Fig. 1). The method includes creating communication variables in the second representation associated with the configured function blocks (for example, VB in Fig. 1). The method includes assigning at least one of the communication variables to at least one of the configured objects (for example, VB is assigned to VO in Fig. 1). The method includes converting information formed by the creating and assigning to associate, with at least one of the function blocks, a first document formulated in a page description language (for example, HTML or XML) and containing first references to corresponding configured objects (for example, a document containing references to the corresponding WinCC objects being associated with a function block in the CFC), and to associate, with at least one of the configured objects, a second document formulated in the page description language (for example, HTML or XML) and containing second references to corresponding function blocks (for example, a document containing references to the corresponding function blocks in the CFC being associated with a WinCC object). Finally, the method includes displaying the first and second documents.

Independent claim 4 recites a method for representing the configuration of an electrical system (Fig. 2A-2B, for example). The method includes generating a graph from sets of representations of node function blocks and connection function blocks of the electrical system (for example, the graph of Fig. 2A represents the CFC of Fig. 2B), the graph having only nodes corresponding to the node function blocks and references to the nodes. Finally, the method includes displaying the graph (for example, Fig. 2A).

Independent claim 8 recites a computer-readable medium encoded with a computer program that when executed by a processor controls the processor to perform a method including configuring function blocks (for example, CFC blocks in Fig. 1). The methods includes

configuring objects associated with the configured function blocks and mapping the configured objects to respective function blocks via communication variables (for example, VB of WinCC is mapped to VO of CFC in Fig. 1). Finally, the method includes generating a first document referring to configured objects and a second document referring to function blocks using the mapping (for example, a document containing references to the corresponding WinCC objects being associated with a function block in the CFC and a document containing references to the corresponding function blocks in the CFC being associated with a WinCC object).

None of the claims contain an element expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.

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VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0103390 ("Gatzemeier") in view of U.S. Patent No. 6,379,164 ("Cash, Jr.").

VII. ARGUMENT

A. Review of the prior art

1. U.S. Patent Application Publication No. 2004/0103390 ("Gatzemeier")

Gatzemeier is directed to "a software tool for formulating an automation task to be solved" which enables "automation functions to be represented as objects on a display unit" (see paragraph [0002]). Gatzemeier discusses "a software tool for formulating an automation task to be solved, in the form of a programming language for automation devices, which enables automation functions to be represented as objects on a display unit" (paragraph [0006]). A template having "template-specific automation functions" can be "created with a software tool and displayed on a display unit" (paragraph [0013], of Gatzemeier). Later-generated objects contain "template-specific parts, object-specific automation functions...and object-specific connecting lines" (Fig. 1 and paragraph [0014], of Gatzemeier).

2. U.S. Patent No. 6,379,164 ("Cash, Jr.")

Cash, Jr. is directed to "a wiring system for providing electrical service to a structure [that] allows all electrical service ports" (column 3, lines 15-17). Cash, Jr. discusses "a processor communicating with either a single electrical receptacle or a plurality of electrical receptacles that communicate with the edifice wiring system through at least one electrified buss in series connection with junction boxes" (column 6, lines 24-28).

B. Claims 1-3 are patentable over U.S. Patent Application Publication No. 2004/0103390 ("Gatzemeier") and U.S. Patent No. 6,379,164 ("Cash, Jr.")

In the final Office Action, the Examiner rejected claims 1-3 over Gatzemeier and Cash, Jr.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, alone or in combination, do not teach or suggest all the features of claim 1 and because the references are not analogous art.

Claim 1 recites "generating and displaying configured function blocks of the electrical system as a first set of representations" and "generating and displaying configured objects as a second set of representations corresponding to the configured function blocks" (lines 2-5). The Applicant respectfully submits that the cited art fails to teach these features.

Claim 1 recites generating and displaying configured function blocks as a *first set of representations* and configured objects as a *second set of representations*. However, as can be seen in Figs. 1-4 of Gatzemeier and the associated descriptions thereof, all of the components, including “template-specific parts” and “object-specific automation functions”, are displayed together. As such, Gatzemeier actually teaches away from representing configured function blocks and configured objects as different sets of representations. Cash, Jr. is cited merely as disclosing a system and method for configuring an *electrical system*. Therefore, no teaching of these features has been cited or found in Cash, Jr. either.

Claim 1 also recites

converting information formed by said creating and assigning to associate with at least one of the function blocks, a first document formulated in a page description language and containing first references to corresponding configured objects, and to associate with at least one of the configured objects, a second document formulated in the page description language and containing second references to corresponding function blocks

(lines 11-15). The Applicant respectfully submits that the cited art fails to disclose these features.

Gatzemeier discloses “formulating an automation task to be solved, in the form of a programming language for automation devices, which enables automation functions to be represented as objects on a display unit” (paragraph [0006]). The Examiner takes the position that “Gatzemeier is fully directed to representing configured block and/or objects on a display using programming language (see para 006)...” However, claim 1 recites documents formulated in a *page description language*. Gatzemeier merely mentions use of a programming language for *automation devices*, which does not correspond to a *page description language*.

Furthermore, Gatzemeier does not teach converting information associated with a function block into first and second documents formulated in a page description language that correspond to configured objects and function blocks, respectively. As a non-limiting example, function blocks may, for instance, “refer back to a common database and the information about the corresponding sets of representations of the system's function blocks is converted into two HTML documents each having references to the other set of representations in each case...” (see paragraph [0007] of the application). Gatzemeier is silent as to any such conversion and

Cash, Jr. also fails to teach these features.

Finally, it is submitted that Gatzemeier and Cash Jr. are not analogous art. MPEP § 2141.01(a)(I) states that “In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned” (quoting *In re Oetiker*, 877 F.2d 1443 (Fed. Cir. 1992)).

A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.

(MPEP § 2141.01(a)(I), quoting *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858 (Fed. Cir. 1993)). “[T]he similarities and differences in structure and function” carry great weight (see MPEP § 2141.01(a)(II)).

The Examiner takes the position that “Cash, Jr. and Gatzemeier are analogous art because they are from the same field of endeavor and that the system and method teaches by Cash, Jr. is similar to that of Gatzemeier.” However, this is not the case. Gatzemeier is directed to “a software tool for formulating an automation task to be solved” (paragraph [0002]). Cash, Jr., on the other hand, is directed to “a wiring system for providing electrical service to a structure [that] allows all electrical service ports” (column 3, lines 15-17). Cash, Jr. discusses “a processor communicating with either a single electrical receptacle or a plurality of electrical receptacles that communicate with the edifice wiring system through at least one electrified buss in series connection with junction boxes” (column 6, lines 24-28). The MPEP indicates that differences in structures or functions carry great weight in a determination of whether two references are analogous art. Gatzemeier is silent as to the structures and functions discussed in Cash, Jr. Further, nothing has been cited or found that demonstrates whether it is possible to combine the automation system of Gatzemeier with the system for configuring electrical receptacles of Cash, Jr.

Neither Gatzemeier nor Cash, Jr. teach all of the features of claim 1 and Gatzemeier and Cash, Jr. are not analogous art. Thus, Gatzemeier and Cash, Jr., both individually and in combination, fail to render claim 1 unpatentable under 35 U.S.C. § 103(a).

Claims 2-3 depend directly or indirectly on independent claim 1. These dependent claims contain each and every limitation of independent claim 1 and additional patentable limitations. Accordingly, the 35 U.S.C. § 103(a) rejection fails for these dependent claims for the same reasons it fails for independent claim 1.

C. Claims 4-7 are patentable over U.S. Patent Application Publication No. 2004/0103390 ("Gatzemeier") and U.S. Patent No. 6,379,164 ("Cash, Jr.")

In the final Office Action, the Examiner rejected claims 4-7 over Gatzemeier and Cash, Jr.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, alone or in combination, do not teach or suggest all the features of claim 4 and because the references are not analogous art.

Claim 4 recites "generating a graph from sets of representations of node function blocks and connection function blocks of the electrical system, the graph having only nodes corresponding to the node function blocks and references to the nodes" (lines 3-5). The final Office Action asserts on page 3 that Figs. "3-4 are a graph and [F]ig. 5 further shows a table used for generation of a graph." However, Gatzemeier explicitly states that "FIG[S]. 3 and 4 ... depict an SFC view of automation functions for solving an automation task" (paragraph [0017]). As discussed in Gatzemeier, "programming languages in the form of Continuous Function Chart (CFC) or Sequential Function Chart (SFC), are provided in a programming device for formulating an automation task to be solved" (paragraph [0003]). As such, the illustrations in Figs. 3 and 4 of Gatzemeier are illustrative of *automation functions*, not a graph. Further, there is nothing cited or found in Gatzemeier that teaches or suggests *representing function blocks as nodes*.

Also, as discussed above, Gatzemeier and Cash, Jr. are not analogous art.

Since neither Gatzemeier nor Cash, Jr. teach all of the features of claim 4 and Gatzemeier and Cash, Jr. are not analogous art, Gatzemeier and Cash, Jr., both individually and in combination, fail to render claim 4 unpatentable under 35 U.S.C. § 103(a).

Claims 5-7 depend directly or indirectly on independent claim 4. These dependent claims contain each and every limitation of independent claim 4 and additional patentable limitations. Accordingly, the 35 U.S.C. § 103(a) rejection fails for these dependent claims for the same reasons it fails for independent claim 4.

D. Claim 8 is patentable over U.S. Patent Application Publication No. 2004/0103390 ("Gatzemeier") and U.S. Patent No. 6,379,164 ("Cash, Jr.")

In the final Office Action, the Examiner rejected claim 8 over Gatzemeier and Cash, Jr.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, alone or in combination, do not teach or suggest all the features of claim 8 and because the references are not analogous art.

Claim 8 recites "configuring objects associated with the configured function blocks and mapping the configured objects to respective function blocks via communication variables" and "generating a first document referring to configured objects and a second document referring to function blocks using the mapping" (lines 5-8). Gatzemeier does not teach converting information associated with a function block into first and second documents that correspond to configured objects and function blocks, respectively. As a non-limiting example, function blocks may, for instance, "refer back to a common database and the information about the corresponding sets of representations of the system's function blocks is converted into two HTML documents each having references to the other set of representations in each case..." (see paragraph [0007] of the application). Gatzemeier is silent as to any such conversion and Cash, Jr. also fails to teach these features.

Also, as discussed above, Gatzemeier and Cash, Jr. are not analogous art.

Neither Gatzemeier nor Cash, Jr. teach all of the features of claim 8 and Gatzemeier and Cash, Jr. are not analogous art. Thus, Gatzemeier and Cash, Jr., both individually and in combination, fail to render claim 8 unpatentable under 35 U.S.C. § 103(a).

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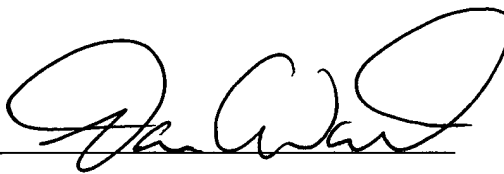
E. CONCLUSION

In summary, Applicant submits that claims 1-8 patentably distinguish over the prior art. Reversal of the Examiner's rejection is respectfully requested.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 5-12-08

By: 
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VIII. CLAIMS APPENDIX (37 C.F.R. § 41.37(c)(1)(viii))

What is claimed is

1. (PREVIOUSLY PRESENTED) A method for representing the configuration of an electrical system, comprising:

generating and displaying configured function blocks of the electrical system as a first set of representations;

generating and displaying configured objects as a second set of representations corresponding to the configured function blocks;

creating communication variables in the second representation associated with the configured function blocks;

assigning at least one of the communication variables to at least one of the configured objects;

converting information formed by said creating and assigning to associate with at least one of the function blocks, a first document formulated in a page description language and containing first references to corresponding configured objects, and to associate with at least one of the configured objects, a second document formulated in the page description language and containing second references to corresponding function blocks; and

displaying the first and second documents.

2. (ORIGINAL) A method according to claim 1, further comprising providing navigation between the first and second set of representations of the function blocks via the first and second references.

3. (ORIGINAL) A method according to claim 1, further comprising changing at least one of the first and second references if the information about at least one of the configured function blocks and configured objects changes.

4. (PREVIOUSLY PRESENTED) A method for representing the configuration of an electrical system, comprising:

generating a graph from sets of representations of node function blocks and connection function blocks of the electrical system, the graph having only nodes corresponding to the node function blocks and references to the nodes; and

displaying the graph.

5. (ORIGINAL) A method according to claim 4, further comprising providing navigation via the representations of the connection function blocks in response to user selection of the references.

6. (ORIGINAL) A method according to claim 5, further comprising repeating said generating to produce a new graph if information about interconnection of the node function blocks changes.

7. (ORIGINAL) A method according to claim 5, wherein said generating places the references on the graph in relation to connections actually present, whereby a measure of configuration progress can be derived therefrom.

8. (PREVIOUSLY PRESENTED) A computer-readable medium encoded with a computer program that when executed by a processor controls the processor to perform a method, comprising:

configuring function blocks;

configuring objects associated with the configured function blocks and mapping the configured objects to respective function blocks via communication variables; and

generating a first document referring to configured objects and a second document referring to function blocks using the mapping.

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X. RELATED PROCEEDING APPENDIX (37 C.F.R. § 41.37(c)(1)(x))

Not applicable